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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 16

Application Number: 10/068,243

Filing Date: February 06, 2002

Appellant(s): SPIESS, BRYAN

N. Paul Friederichs
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/12/03.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Appellant's brief includes a statement that claims 1-13 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) *ClaimsAppealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

6,354,424 ROWLES 3-2002

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claims 6 stands rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation “homogenous” roller added to claim 6 constitutes new matter. Although there is support in the original disclosure for a “monolithic roll”, there is no support in the original disclosure for a homogenous roller. Homogenous means “of the same or a similar kind or nature”. Homogenous, therefore, could have multiple layers of the same material or could include multiple layers of different material to make a uniform structure (ie. same/homogenous thickness), whereas monolithic is only one layer.

Claims 7, 10, and 13 stand rejected under 35 U.S.C. 102(b) as being anticipated by Thompson et al. (4,203,509).

Thompson et al. teach an aircraft roller (fig. 1) comprising a cylindrical roller body 17, the roller body 17, having a length and a diameter, the roller 17 also having an aperture extending along and through the center of the roller 17, the roller 17 fabricated from a polymeric material (col. 2, lines 12-15 and col. 3, lines 21-30, “super-tough nylon”).

Regarding the limitations “the polymer having a burn rate of less than 4.0 inches per minute”, it is noted that Thompson et al. inherently teaches this thermal property. Thompson et al. teach that the polymer used in the roller is made from “nylon” (see col. 2, lines 12-15 and col. 3, lines 21-30). On page 5, second full paragraph of applicant’s specification, applicant describes

that suitable polymers include nylon among with other polymers. Therefore, since both the prior art and the applicant uses “nylon”, it is inherent that Thompson et al. inherently teaches the claimed thermal properties of the polymer. Applicant has not provided the physical and thermal properties of each of the polymer materials described in the specification at page 5, second full paragraph, therefore, it is understood that all of the described polymer materials on page 5, second full paragraph of applicant’s specification meet the claimed “burn rate of less than 4.0 inches per minute, a compressibility strength of at least 200 psi, impact strength of at least 0.5 (ft. lbs.)/inch, and a flexural strength of at least 20 psi”, with “nylon” as taught by Thompson et al. being among the polymer materials. Therefore, Thompson et al. also inherently teach the limitations of claim 13.

Regarding claim 10, Thompson et al. teach bearings 13.

Claims 1-6 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (4,203,509) in view of Rowles (6,354,424).

Thompson et al. teach an aircraft roller system (col. 1, line 6) comprising: a roller (fig. 1) adapted to communicate cargo into and out of an aircraft (col. 1, line 6), the roller (fig. 1) being cylindrical in shape and having a length and diameter, the roller having a center aperture extending through the length of the roller and the roller being fabricated from a polymer (col. 2, lines 12-15 and col. 3, lines 21-30, “super-tough nylon”).

Regarding the limitations “the polymer having a burn rate of less than 4.0 inches per minute, a compressibility strength of at least 200 psi, impact strength of at least 0.5 (ft. lbs.)/inch, and a flexural strength of at least 20 psi”, it is noted that Thompson et al. inherently teaches these

physical and thermal properties. Thompson et al. teach that the polymer used in the roller is made from "nylon" (see col. 2, lines 12-15 and col. 3, lines 21-30). On page 5, second full paragraph of applicant's specification, applicant describes that suitable polymers include nylon among with other polymers. Therefore, since both the prior art and the applicant uses "nylon", it is inherent that Thompson et al. inherently teaches the claimed physical and thermal properties of the polymer. Applicant has not provided the physical and thermal properties of each of the polymer materials described in the specification at page 5, second full paragraph, therefore, it is understood that all of the described polymer materials on page 5, second full paragraph of applicant's specification meet the claimed "burn rate of less than 4.0 inches per minute, a compressibility strength of at least 200 psi, impact strength of at least 0.5 (ft. lbs.)/inch, and a flexural strength of at least 20 psi", with "nylon" as taught by Thompson et al. being among the polymer materials.

Thompson et al. teach the invention cited with the exception of having a shaft in the form of an elongate cylinder having a diameter sized to rotatably fit within the central aperture of the roller, the shaft further having a means for retention located upon the shaft ends and an elongate "U" shaped roller rack, the roller rack sized to extend the length of the roller and having a pair of upwardly extending ends located adjacent the ends of the roller, each end having an aperture sized to receive the respective shaft end and locate the shaft in a fixed location.

Rowles teaches an aircraft rack comprising a shaft 12 in the form of an elongate cylinder having a diameter sized to rotatably fit within the central aperture of the roller 11, the shaft 12 further having a means for retention 14,12a located upon the shaft ends and an elongate "U" shaped roller rack 13, the roller rack 13 sized to extend the length of the roller 11 and having a

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pair of upwardly extending ends 13 located adjacent the ends of the roller 11, each end 13 having an aperture sized to receive the respective shaft end 12 and locate the shaft 12 in a fixed location.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Thompson et al. with a shaft in the form of an elongate cylinder having a diameter sized to rotatably fit within the central aperture of the roller, the shaft further having a means for retention located upon the shaft ends and an elongate "U" shaped roller rack, the roller rack sized to extend the length of the roller and having a pair of upwardly extending ends located adjacent the ends of the roller, each end having an aperture sized to receive the respective shaft end and locate the shaft in a fixed location, in light of the teachings of Rowles, in order to securely fasten the roller to the aircraft floor.

Thompson et al./Rowles teach the invention cited with the exception of using the claimed polymers in claims 2 and 3.

At the time of the invention, it would have been an obvious matter of design choice to a person of ordinary skill in the art, to have used the claimed polymers because applicant has not disclosed that the claimed polymers provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally as well with the nylon polymer taught by Thompson et al. or the claimed polymers, because either type of polymer perform the same function of providing a roller surface that has the desired compressibility and strength. Furthermore, in applicant's specification, at page 5, lines 8-13, there is a listing of different polymers and all are suitable for the rollers. There is no indication that one polymer is better than another.

Regarding claim 4, Rowles teaches bushings (see fig. 2 in vicinity of lead line 12).

Regarding claim 5, Rowles teaches a pair of bearings **29**.

Regarding claim 6, Thompson et al. teach a homogenous roller because the outer and inner layers **17,10** are both cylindrical in shape. The inner and outer layers **17,10** are therefore homogenous in shape. Also, the inner and outer layers are homogenous in thickness.

Claims 8 and 9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. in view of Rowles.

Thompson et al. teach the invention cited with the exception of having bushings.

Rowles teaches bushings (fig. 2).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Thompson et al. with bushings, in light of the teachings of Rowles, in order to provide better support for the roll.

Claims 11 and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al.

Thompson et al. teach the invention cited with the exception of using the claimed polymers in claims 11 and 12.

At the time of the invention, it would have been an obvious matter of design choice to a person of ordinary skill in the art, to have used the claimed polymers because applicant has not disclosed that the claimed polymers provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally as well with the nylon polymer taught by Thompson et

al. or the claimed polymers, because either type of polymer perform the same function of providing a roller surface that has the desired compressibility and strength. Furthermore, in applicant's specification, at page 5, lines 8-13, there is a listing of different polymers and all are suitable for the rollers. There is no indication that one polymer is better than another.

(11) Response to Argument

Appellant argues that there is support for the limitation "homogeneous". However, there is no support in the original disclosure for the limitation "homogeneous". The limitation "homogeneous" was for the first time added to the disclosure in claim 6, line 2 in the amendment filed 3/19/03 (see page 3 of paper #9). However, the term "homogeneous" is not found in the original disclosure, the specification has no description or definition of the word "homogeneous". In adding the limitation "homogeneous", appellant is attempting to cover more than what was originally disclosed because there are multiple definitions for the word "homogeneous". The dictionary definition of the word "homogeneous" includes: "of the same or similar nature or kind, uniform structure or composition throughout, consisting of terms of the same degree or elements of the same dimension" (see attached dictionary definition). Appellant's original disclosure has support for only a single monolithic roller, by adding the limitation "homogeneous" applicant is attempting to cover more than what was disclosed because "homogeneous" could cover a roller with multiple layers or multiple materials. Appellant's roller can only be made of a single layer with a single material.

The first sentence on page 7 of the brief which reads: "Thompson et al. discloses a roller that has a nylon "tire" disposed about a body 10 (material undisclosed believed to metal) does

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not show “a roller fabricated from a polymeric material.” It appears that appellant is arguing that Thompson et al. does not teach a roller fabricated from a polymeric material. However, in col. 3, lines 21-22, Thompson et al. teach using “a tough variety of nylon” which is a polymeric material. Furthermore, on page 7, line 3 of appellant’s brief, appellant admits that Thompson et al. teaches a polymer.

Appellant argues that the roller of Thompson et al. is not capable of supporting weights by rollers, however, the roller of Thompson et al. is a cargo roller used in cargo aircraft capable of carrying the maximum possible freight load, consistent with safe operation. (col. 1, lines 7-9 of Thompson et al.).

Appellant argues that Thompson does not have a roller fabricated from a polymeric material, but rather discloses a roller that has a polymeric part. It is noted however, in fig. 1 of Thompson et al., there is clearly shown a roller fabricated from a polymeric material 17.

Appellant argues that Thompson et al. do not disclose “the polymer having a burn rate of less than 4.0 inches per minute” because polymers for aircraft need to have physical properties different from the standard roller. It is noted however, that Thompson et al. teach a roller with a polymer made of nylon (col. 3, lines 21-30) which is used in cargo aircraft (col. 1, lines 4-6). The use of nylon inherently meets the limitation “polymer having a burn rate of less than 4.0 inches per minute” because appellant uses the same materials as those taught by the prior art. On page 5, lines 8-13 of appellant’s specification, appellant states “It has been found that various readily available polymer are suitable for fabrication into rollers 10. Suitable polymers would include polysulfone, **nylon**, polycarbonate, polythermide, …”.

Furthermore, appellant's declaration filed 3/19/03 (paper #7) states on page 2, paragraph number 5.: "Fires in aircraft are serious threats. Accordingly, a roller that burns more than four inches per minute is considered not to function as an aircraft part. Other rollers do not have such a restriction." It is noted that the roller of Thompson et al. is specifically used as an aircraft part (col. 1, lines 4-6) and nylon is used as the material (the same material that appellant uses, see page 5, lines 8-13). Therefore, the roller of Thompson et al. is used in the same environment as that of appellant. Thompson et al. inherently meets the limitation "burns less than four inches per minute" because Thompson et al. teaches a roller that is used in the same environment and has the same material that appellant uses.

See also MPEP 2112.01 which states:

Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. See also *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Claims were directed to a titanium alloy containing 0.2-0.4% Mo and 0.6-0.9% Ni having corrosion resistance. A Russian article disclosed a titanium alloy containing 0.25% Mo and 0.75% Ni but was silent as to corrosion resistance. The Federal

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Circuit held that the claim was anticipated because the percentages of Mo and Ni were squarely within the claimed ranges. The court went on to say that it was immaterial what properties the alloys had or who discovered the properties because the composition is the same and thus must necessarily exhibit the properties.).

See also *In re Ludtke*, 441 F.2d 660, 169 USPQ 563 (CCPA 1971) (Claim 1 was directed to a parachute canopy having concentric circumferential panels radially separated from each other by radially extending tie lines. The panels were separated "such that the critical velocity of each successively larger panel will be less than the critical velocity of the previous panel, whereby said parachute will sequentially open and thus gradually decelerate." The court found that the claim was anticipated by Menget. Menget taught a parachute having three circumferential panels separated by tie lines. The court upheld the rejection finding that applicant had failed to show that Menget did not possess the functional characteristics of the claims.); *Northam Warren Corp. v. D. F. Newfield Co.*, 7 F. Supp. 773, 22 USPQ 313 (E.D.N.Y. 1934) (A patent to a pencil for cleaning fingernails was held invalid because a pencil of the same structure for writing was found in the prior art.).

"Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990) (Applicant argued that the claimed composition was a pressure sensitive adhesive containing a tacky polymer while the product of the reference was hard and abrasion resistant. "The Board correctly

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found that the virtual identity of monomers and procedures sufficed to support a *prima facie* case of unpatentability of Spada's polymer latexes for lack of novelty.").

Therefore, a sound basis has been shown that the prior art nylon is the same material that appellant teaches, appellant has not shown that the prior art nylon do not necessarily posses the claimed physical properties.

Appellant argues that polymers for aircraft need to have physical properties different from the standard roller. It is noted, however, that Thompson et al. clearly uses the roller for aircraft (col. 1, lines 5-6), therefore, the roller of Thompson et al. is an aircraft roller and not a "standard roller" as appellant suggests.

Appellant argues that Thompson does not actually assert the nylon is super-tough and in fact makes a somewhat derogatory statement in regards to toughness, however, on col. 3, lines 14-30 of Thompson, the use of a nylon roller is clearly taught. The roller is made with the super tough nylon described. Thompson states "... we have obtained our highly satisfactory results using a so-called super-tough nylon...".

Appellant argues on page 9, last three lines of the brief that "applicant at page 9, lines 3-6 again makes a separation when the use is for aircraft." It is noted however, that Thompson also uses the roller for aircraft (col. 1, lines 5-6).

Appellant argues that the layers of Thompson et al. are not "homogeneous" because the layers are not "of the same or a similar kind or nature" and that the inner and outer layers of Thompson et al. are different materials with different properties. It is noted, however, that Thompson et al. meets the "homogeneous" limitation because the layers are the same or similar thickness and are both the same or similar in cylindrical shape.

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For the above reasons, it is believed that the rejections should be sustained.

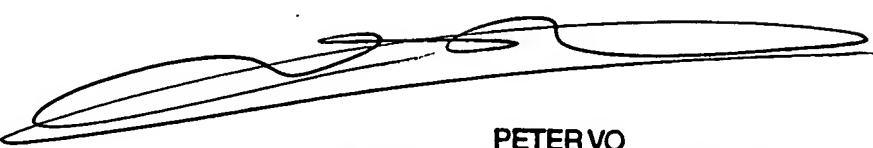
Respectfully submitted,

MJ
March 1, 2004

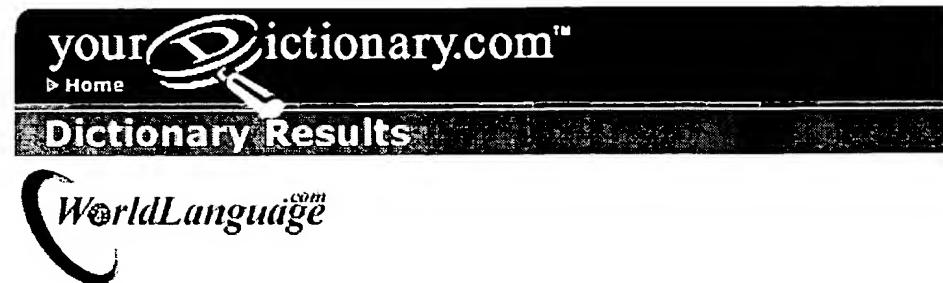
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ho·mo·ge·ne·ous

(click to hear the word) (hō'mō-jē'nē-əs, -jēn'yəs)

adj.

1. Of the same or similar nature or kind: "*a tight-knit, homogeneous society*" (*James Fallows*).
2. Uniform in structure or composition throughout.
3. Mathematics Consisting of terms of the same degree or elements of the same dimension.

[From Medieval Latin *homogeneus*, from Greek *homogenēs* : *homo-*, *homo-* + *genos*, *kind* ; see **heterogeneous**.]

ho·mo·ge·ne·ous·ly *adv.*

ho·mo·ge·ne·ous·ness *n.*

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